

KTM RuMASS[®]

CORIOLIS FLOW METER WITH INTELLECTUAL
DIAGNOSTIC FUNCTIONS AND ACCREDITED DENSITY CHANNEL

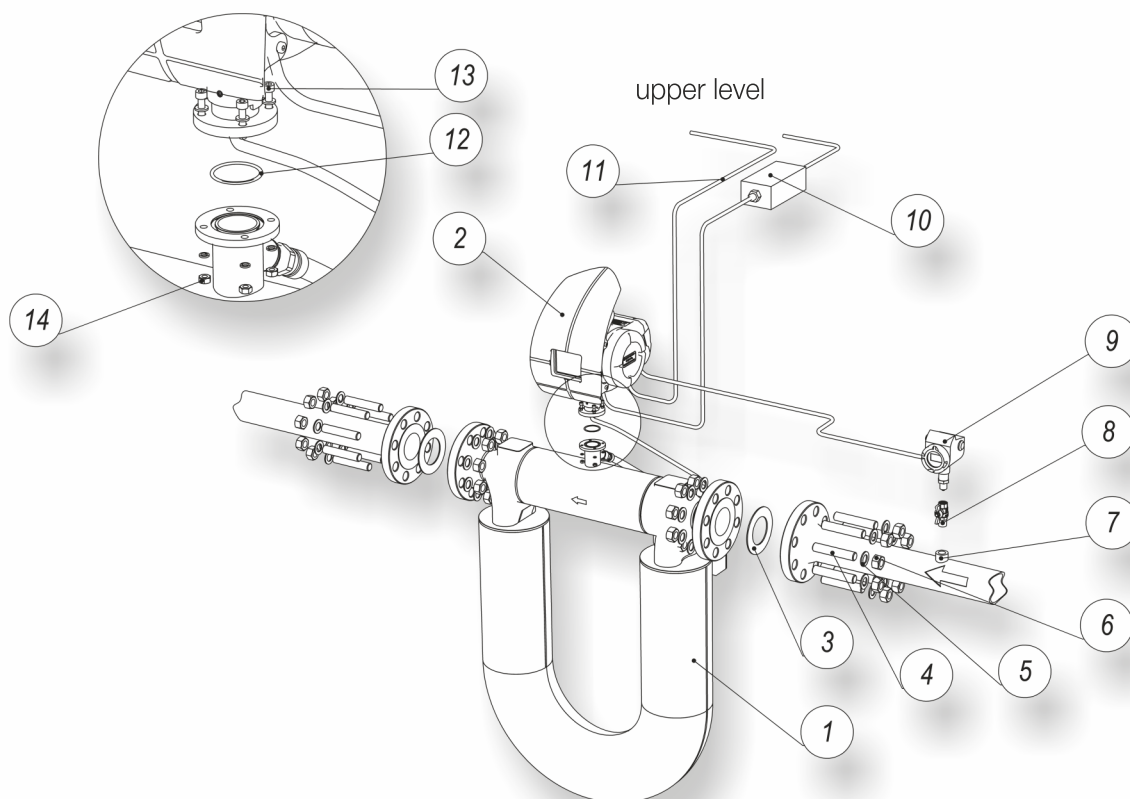


APPLICATIONS:

- Direct simultaneous measurement of mass flow rate, density, temperature of liquids, gases, including cryogenic and aggressive fluids
- Measurement in the food and chemical industry in compliance with sanitary and epidemiological standards
- Process control within industrial plants, including measurement of liquids with high solids content
- Mixing and dosing control systems
- LNG flow measurement at filling stations, including LNG vapour measurements

MEASURING MEDIA:

- ✓ petroleum oil and its co-products
- ✓ gas condensate
- ✓ cryogenic fluids including LNG
- ✓ acids
- ✓ solvents and other products



- | | |
|--------------------------------------|----------------------|
| 1. sensor | 8. ball valve |
| 2. information processing unit (IPU) | 9. pressure sensor |
| 3. gasket | 10. power unit |
| 4. stud | 11. connection cable |
| 5. washer | 12. gasket |
| 6. nut | 13. screw |
| 7. pressure sensor arrangement | 14. nut |

- ✓ Our products are completely developed and manufactured in Russian Federation
- ✓ We have complete set of design and experimental data of our products that verify product quality
- ✓ We have own testing facilities that guarantee product precision and durability
- ✓ We have service centers across the world that can provide complete set of customer support
- ✓ We have robust production line that ensures shortest on-time product delivery to our customers



Patented design of separation manifolds. Optimized shape of the flow section by numerical methods provides reduced hydraulic losses by 15% compared to existing analogues

Mass flow measurement error limits: $\pm 0,1\%$; $\pm 0,15\%$; $\pm 0,2\%$; $\pm 0,25\%$; $\pm 0,5\%$

Meter does not need stright sections at inlet and outlet to operate

Mounting sizes can be customized to meet customer needs

Real time diagnostics of measurement tube condition and presence of deposits on measuring tubes

Automatized welding facility ensures high quality and repeatability of the meters

Automatic compensation of temperature and pressure variations by built-in correction algorithm

Automatic zero point correction

Certified density measurement channel

Parts contacting measurement media made of stainless steel AISI 316L

Sanitary and hygienic design

Laboratory confirmation of vibration resistance of industrial frequencies

Service life - 20 years

YOUR BENEFIT

TECHNICAL DETAILS

Nominal diameter	Dn15, DN25, DN50, DN80, DN100, DN200, DN250
Flow rate measurement range	4-2550000 kg/h
Temperature of the measurement media	-196...+400 °C
Pressure of the measurement media	0...400 bar
Measurement tube material	316L, Nickel alloy C22
Ambient temperature	-70...+60 °C
Measurement media	liquid/liquefied gas/gas
Density of the media	up to 3000 kg/m ³
Ex approvals: IPU Sensor	1 EX db [ia Ga] IIB/IIC T6 Gb X 0EX ia IIB/IIC T3..T6 Ga X
Enclosure rate	IP66/IP67
Connection sizes	ASME, DIN, EN, JIS, GOST
I/O signals and ports	<ul style="list-style-type: none"> - 3 pulse/digital outputs - Optical (infrared), with support for Modbus RTU; - 2 analog inputs for temperature and pressure sensors, current loop with HART support - Analog configurable output, current loop with HART support - 2 digital RS-485 with support for Modbus RTU and Modbus ASCII - Configurable digital (discrete) - Digital Ethernet Output - Foundation FieldBus
Accuracy:	
- mass flow rate and mass of the fluid	±0,1%; ±0,15%; ±0,2%; ±0,25%; ±0,5%
- volume flow rate and volume of the fluid	±0,11%; ±0,2%; ±0,25%; ±0,5%
- mass flow rate of the liquefied natural and other cryogenic fluids	±0,5%
- mass flow rate of gas media	±0,5%; ±0,35%
Temperature measurement error limit	±1 °C
Density measurement error limit	±5 kg/m ³ ; ±1 kg/m ³ ; ±0,5 kg/m ³ ; ±0,2 kg/m ³
Service life	20 years